Zervas Elementary School Reconstruction Project
Transportation Division Presentation

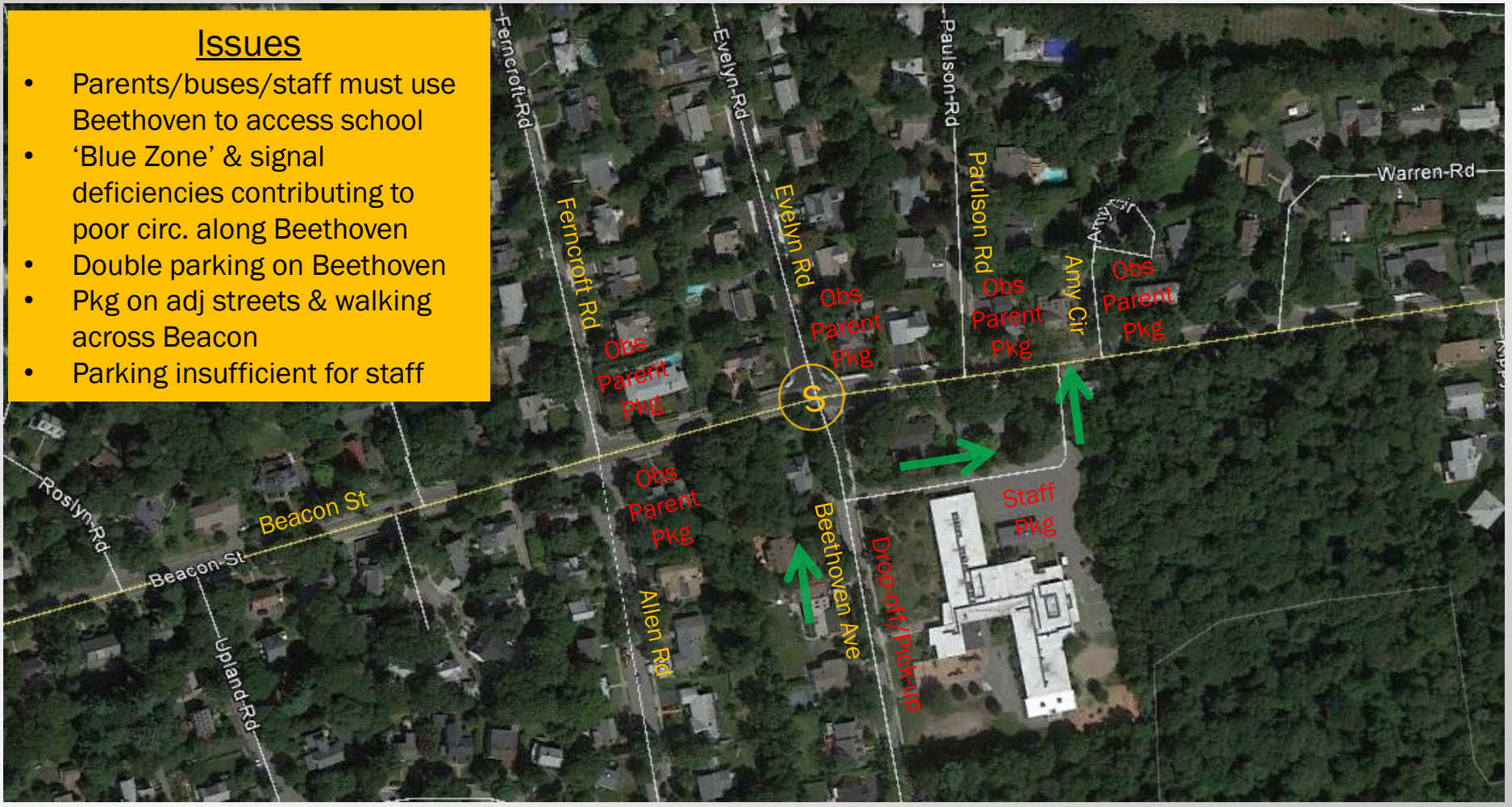
City of Newton

December 1, 2014

Existing Conditions

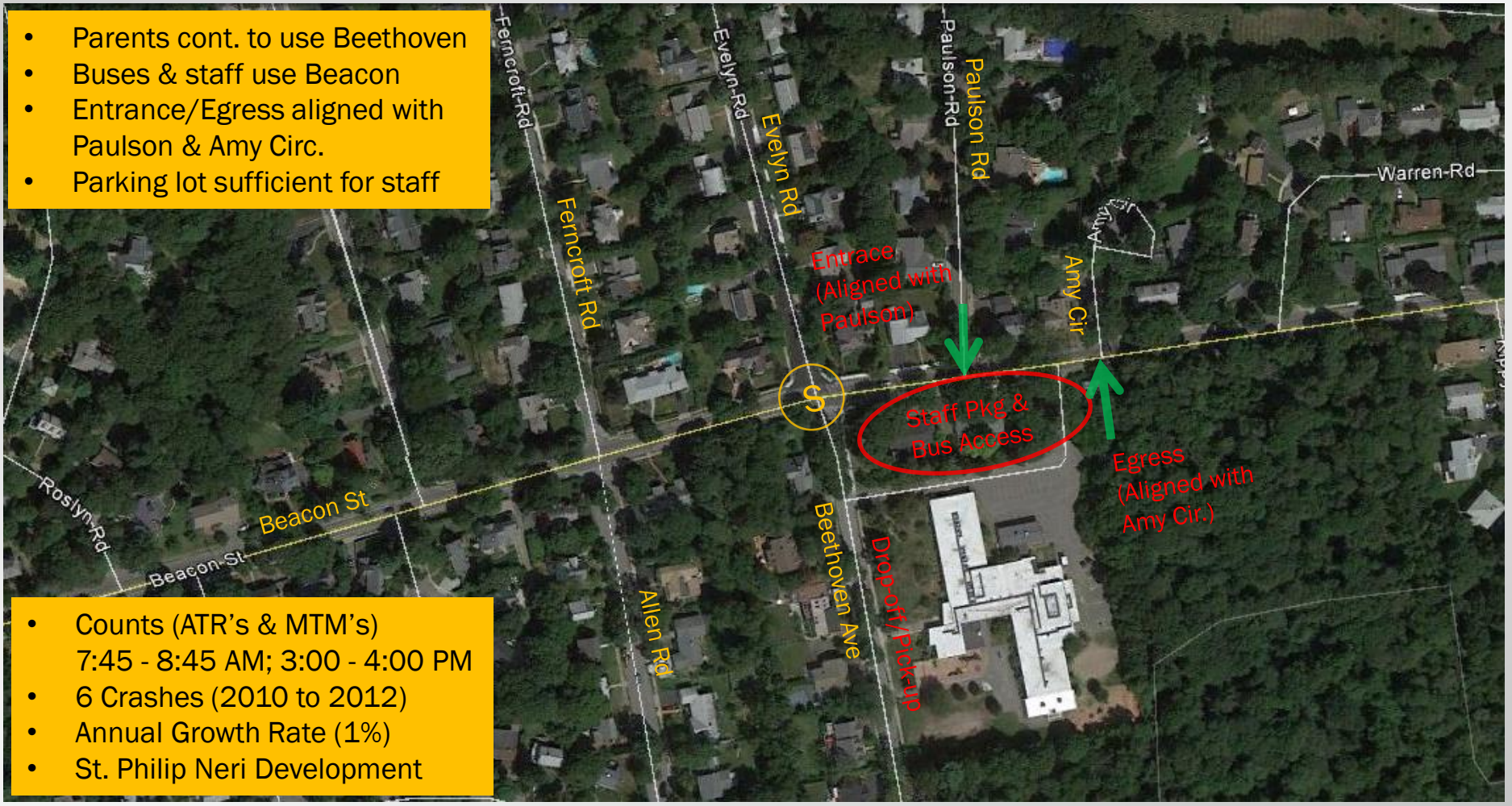
Issues

- Parents/buses/staff must use Beethoven to access school
- 'Blue Zone' & signal deficiencies contributing to poor circ. along Beethoven
- Double parking on Beethoven
- Pkg on adj streets & walking across Beacon
- Parking insufficient for staff



Proposed Site Improvements

- Parents cont. to use Beethoven
- Buses & staff use Beacon
- Entrance/Egress aligned with Paulson & Amy Circ.
- Parking lot sufficient for staff



- Counts (ATR's & MTM's) 7:45 - 8:45 AM; 3:00 - 4:00 PM
- 6 Crashes (2010 to 2012)
- Annual Growth Rate (1%)
- St. Philip Neri Development

Future Traffic Conditions

Future Vehicle Trips (Design year 2014)

- Increase in enrollment from 320 to 490 (+170 students)
- TIS assumes 1 veh trip/student (+170 trips)
- Using TIS volume of 174 veh currently exiting Beethoven, by extrapolation: 174 veh/320 stud = Future/490 stud or **266 veh/hr**, 266-174 (+92 trips)
- JLA provided following:

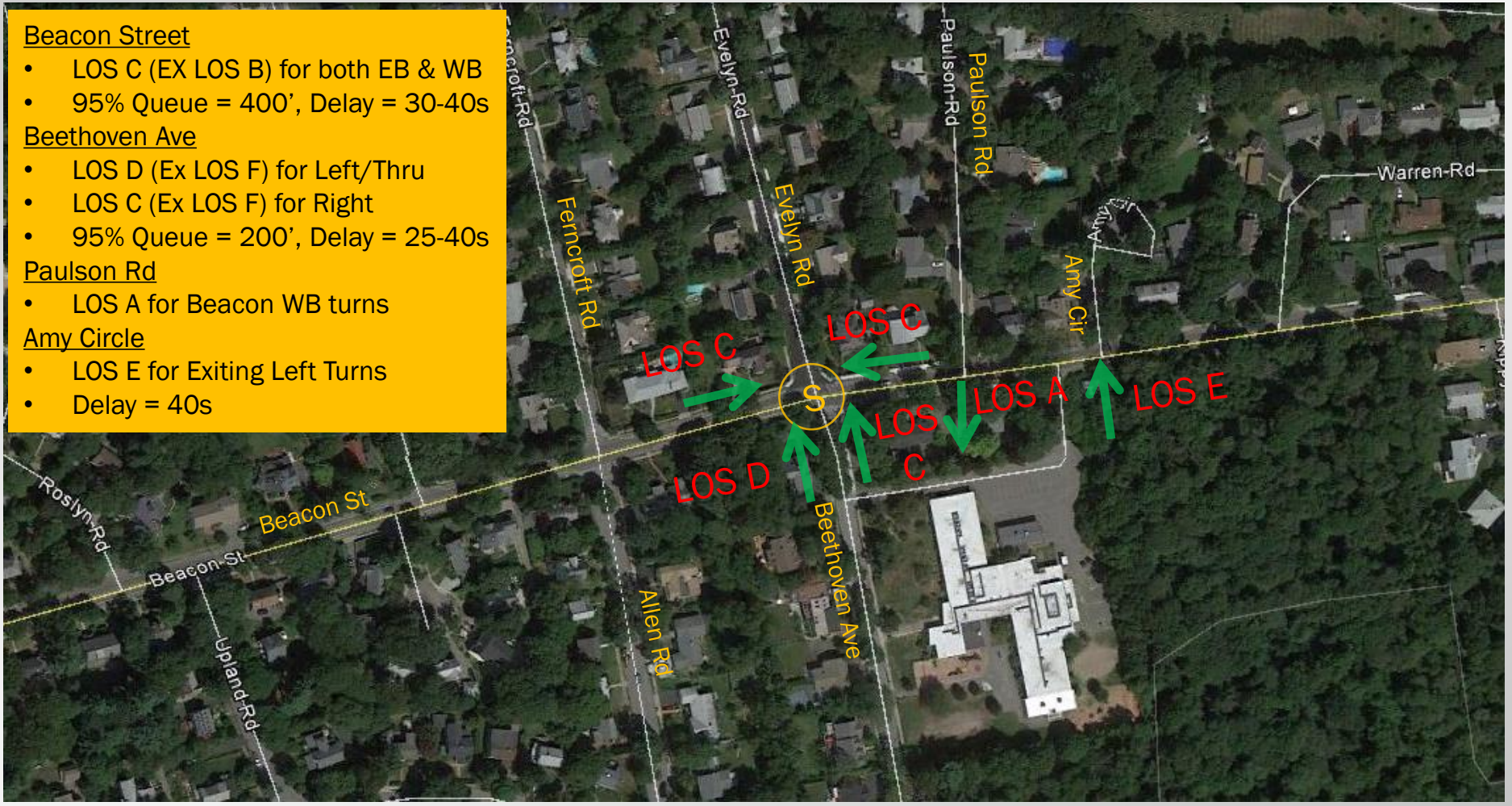
Mode	Current (230 Families)		Future (360 Families)	
	Percentage (%)	No. Students	Percentage (%)	No. Students
Walk/Bike	43	134	35	171
Bus	11	34	15	74
Vehicle	46	144*	50	245**
Total	100	312	100	490

* Equates to 105 vehicles with 25% families with more than one student enrolled, 2% car pool, 27% vehicles transporting at least 2 students.

** Equates to 179 vehicles with 25% families with more than one student enrolled, 2% car pool, 27% vehicles transporting at least 2 students.

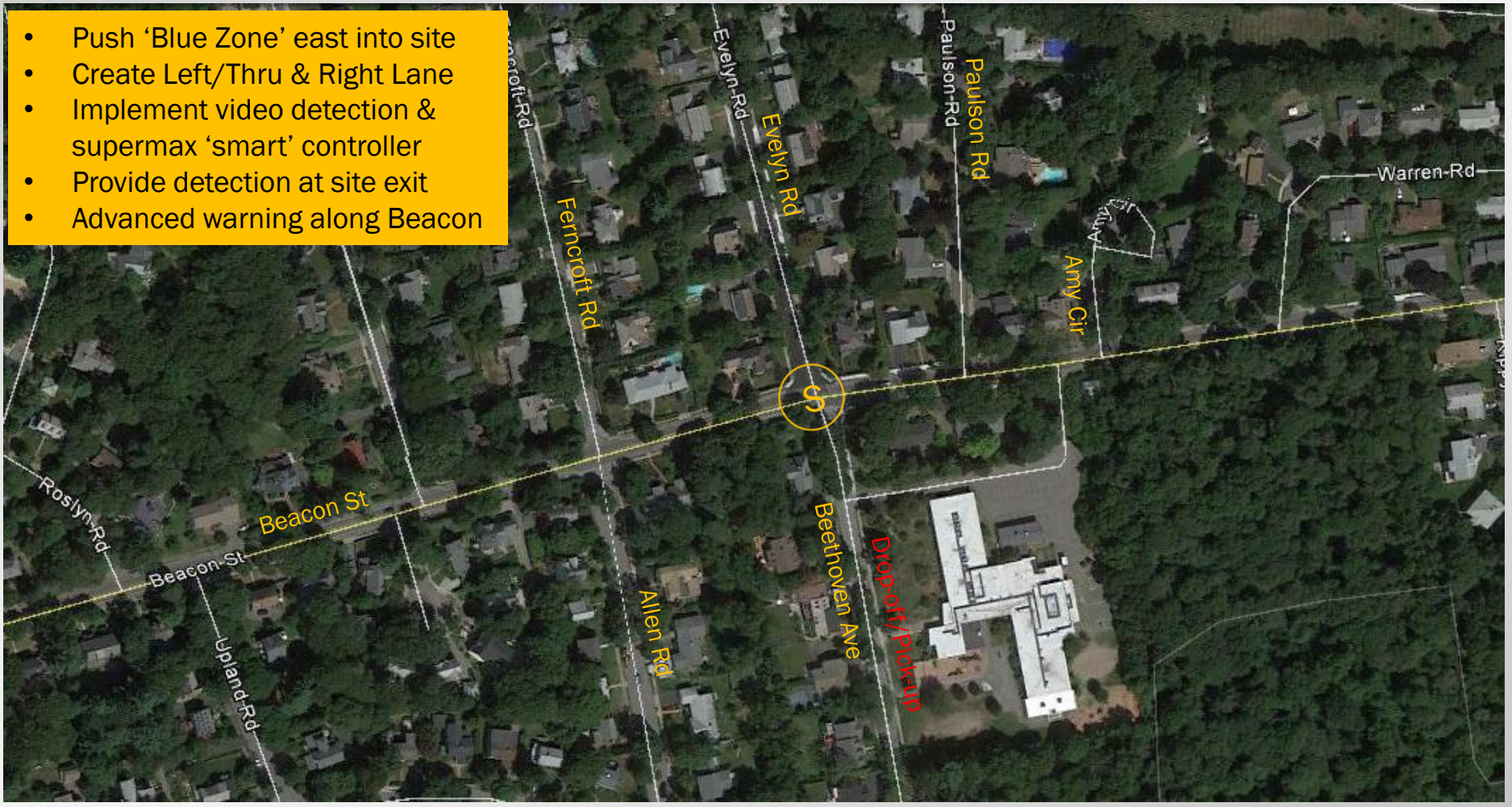
This results in a projected volume of 179 – 105 (+74 trips)

Traffic Analysis – Future AM Level of Service



Future Traffic Accommodation

- Push ‘Blue Zone’ east into site
- Create Left/Thru & Right Lane
- Implement video detection & supermax ‘smart’ controller
- Provide detection at site exit
- Advanced warning along Beacon



Conclusions & Next Steps

Conclusions

- Site layout provides best configuration to ensure both vehicular/pedestrian safety
- TIS is reasonable and sound. Approach to future traffic volumes conservative yet results in overall improved (and acceptable) LOS. Believe circulation will operate better than projected
- Reconfiguration of Beacon/Beethoven access is major improvement to site
- Parking lot accommodates future staff and extra-curricular events

Next Steps

- City will continue to coordinate with Design Team and begin preliminary design of off-site improvements, cost estimates and schedule
- Finalize traffic signal analysis & develop specific improvements/upgrades
- Engage in public outreach program to obtain community input
- Coordinate with various City Committees for necessary approvals
- Finalize design and implement construction

End of Presentation